Ch. 6 mis – college essay

The CloudThe elastic leasing of pooled computer resources over the InternetElasticComputing resources leased can be increased or decreased dynamically, programmatically in a short span of time and that organizations pay for just the resources they use. Pooled-A group of servers-Cloud resources are pooled because many different organizations use the same physical hardware; they share that hardware through virtualization.-Cloud vendors benefit from economies of scale – average cost of production decreases as size of operation increases-Major cloud vendors operate enormous data centers (server farms)Negatives of cloud computingLoss of controlComputer NetworkA collection of computers that communicate with one another over transmission lines or wirelesslyLAN(Local Area Network) – connects computers that reside in a single geographic location on the premises of the company that operates the LAN. Two to several hundred computersWAN(Wide Area Network) – connects computers at different geographic locations. Ex: Computers for a college of business located on multiple campusesInternetNetwork of networksIntranetA private internet used exclusively within an organizationProtocolA set of rules and data structures for organizing communicationSOHOSmall office or home officeIEEE 802. 3 protocol (Ethernet)Used for LAN connection. Also called Ethernet – specifies hardware characteristics, such as which wire carries which signals. Also describes how messages are to be packaged and processed for wired transmissions of the LAN. 10/100/1000 EthernetMost personal computers supportIEEE 802. 11 protocolWireless LAN connections useBluetoothAnother common wireless protocol. Designed for transmitting data over short distances, replacing cables. ISP(Internet service provider)-What your actually connecting to when you connect to the Internet– 3 important function1)

Provides you with a legitimate Internet address2) Serves as gateway to Internet3) Pays for the InternetDSLDigital subscriber line – operates on the same lines as voice telephones, but it operates so it does not interfere with voice telephone service. DSL's use their own protocols for data transmission. Cable linesProvide high-speed data transmission using cable TV linesHopMovement from one network to anotherPacketA message that moves across the InternetNetworks owned by large telecommunication providers known as …CarriersPeering agreementsHow large carriers exchange traffic freely without charging each other access feesNet neutrality principleAll data is created equally – carriers should not be able to decide which sites load quickly, which apps are allowed on a network, and which content is acceptableIP addressInternet address – a number that identifies a particular devicePublic IP address-Identifies a particular device on public Internet-Assigned by ICANN (internet Corporation for Assigned Names and Numbers)-U. S. Department of Commerce no longer has oversight over ICANNPrivate IP Address-Identifies a device on a private network, usually a LAN-Assignment controlled within LANDomain NameA worldwide-unique name that is affiliated with a public IP addressURLUniform Resource Locator-address on the InternetThree-tier architectureA design of user computers and servers that consist of 3 categories. 1) user tier 2) server tier 3) database tierUser tierConsists of computer, phones and other mobile devices that have browsers that request ; process webpagesServer tierConsists of computers that run Web servers and process application programsDatabase tierConsists of computers that run a DBMS that processes requests to retrieve and store dataWeb pageDocument that is coded in, usually htmlWeb serverProgram that runs on a server-tier computer and manage traffic by

sending and receiving Web pages to and from clientsCommerce serverAn application program that runs on a server-tier computerTCPTransmission Control Protocol – Breaks traffic up into packets and sends each one along its wayIPInternet Protocol – Specifies routing of data communication through networks. Routers – Small, special purpose computers that route packets to their destinationTCP/IP Protocol ArchitectureDefines Internet protocols – 5 layers1) Physical- Hardware specifications2) Data Link- Flow among switches and access points3) Internet- Internet routing4) Transport- Reliable Internet transport5) Application- Enable communication among programsHypertext Transfer Protocol(http)- protocol used between browsers and web serverssmtpSimple Mail Transfer Protocol- used for email transmissionsftpFile Transfer Protocol- used to move files over the InternetSaaSSoftware as a service- provides not only hardware infrastructure, but an operating system and application programs as well. Ex: iCloudPaaSPlatform as a service- vendors provide hosted computers an operating system and possible a DBMS. Ex: Microsoft AzureIaaSInfrastructure as a service- the cloud hosting of a bare server computer or data storageCDNContent delivery network: -System of hardware and software stores user data in many different geographical locations and makes data available on demand.-Provides specialized types of PaaS but usually considered in its own category-Minimize latency-Used to store and deliver content seldom changedPublic IP addresses ; domain names-IPv4 (32 bit)- 4 decimal notation-IPv6- Eight hexadecimal dotted notationVPNVirtual public network- uses public Internet to create appearance of a private connection on secure networkTunnelVirtual private pathway over a public or shared network from the VPN client to VPN serverA _____ is a set of rules that

programs on two communicating devices follow. ProtocolA private internet that is used exclusively within an organization is called a(n) _____. IntranetA(n) _____ is a number that identifies a particular device. IP addressA(n) _____ uses the Internet to create the appearance of private, secure connections. VPNComputers that reside in different geographic locations are connected using a(n) _____. WANThe protocols used on the Internet are arranged according to a structure known as the _____ protocol architecture. TCP/IPWhich of the following features distinguishes a LAN from a WAN? LAN connects computers in a single locationWhich of the following protocols guarantees secure data transmission? httpsWhich of the following refers to the three tiers in the three-tier architecture? user, server ; database_____ are programs that run on a server-tier computer and manage traffic by sending and receiving Web pages to and from clients. web servers